

CLAIMS

What is claimed is:

- 1 1. A method of updating XML-schema-based data to conform to an updated XML
2 schema, the method comprising:
3 based on a first XML schema that indicates a first structure of one or more first XML
4 attributes, and one or more first values that correspond to said one or more
5 first XML attributes, generating first data that indicates said first structure and
6 a correlation between said one or more first values and said one or more first
7 XML attributes; and
8 based on said first data and a set of one or more transformations, generating second
9 data that indicates a second structure of one or more second XML attributes
10 and a correlation between one or more of said one or more first values and one
11 or more of said one or more second XML attributes;
12 wherein said second structure is indicated by a second XML schema that differs from
13 said first XML schema.
- 1 2. A method of updating XML-schema-based data to conform to an updated XML
2 schema, the method comprising:
3 based on a first XML schema that indicates a first structure of one or more first XML
4 elements, and one or more first values that correspond to said one or more
5 first XML elements, generating first data that indicates said first structure and
6 a correlation between said one or more first values and said one or more first
7 XML elements; and

8 based on said first data and a set of one or more transformations, generating second
9 data that indicates a second structure of one or more second XML elements
10 and a correlation between one or more of said one or more first values and one
11 or more of said one or more second XML elements;
12 wherein said second structure is indicated by a second XML schema that differs from
13 said first XML schema.

1 3. The method of Claim 2, wherein said one or more transformations are expressed in
2 Extensible Stylesheet Language (XSL).

1 4. The method of Claim 2, wherein said one or more first values are stored in one or
2 more database tables.

1 5. The method of Claim 2, further comprising:
2 based on said first XML schema and one or more second values that correspond to
3 said one or more first XML elements, generating third data that indicates said
4 first structure and a correlation between said one or more second values and
5 said one or more first XML elements; and
6 based on said third data and said set of one or more transformations, generating fourth
7 data that indicates said second structure and a correlation between one or more
8 of said one or more second values and one or more of said one or more second
9 XML elements;
10 wherein said one or more second values differ from said one or more first values.

1 6. The method of Claim 2, further comprising:
2 based on a database table that corresponds to an XML element indicated by said first
3 XML schema, generating a first Data Definition Language (DDL) statement

4 that, when executed, will cause a database table that corresponds to said XML
5 element to be created.

1 7. The method of Claim 6, further comprising:
2 executing said first DDL statement; and
3 based on said second data, inserting one or more of said one or more first values into
4 a database table that was generated as a result of executing said first DDL
5 statement.

1 8. The method of Claim 6, further comprising:
2 generating a second DDL statement that, when executed, causes effects of said first
3 DDL statement to be reversed.

1 9. The method of Claim 8, further comprising:
2 determining whether an error has occurred in executing said first DDL statement; and
3 in response to determining that said error has occurred, executing said second DDL
4 statement.

1 10. The method of Claim 6, further comprising:
2 generating one or more rollback statements that, when executed, cause said inserting
3 to be reversed.

1 11. The method of Claim 10, further comprising:
2 determining whether an error has occurred in said inserting; and
3 in response to determining that said error has occurred, executing said one or more
4 rollback statements.

1 12. The method of Claim 2, further comprising:

2 based on said first XML schema and a third XML schema that indicates a third
3 structure that is based on said first structure, generating a fourth XML schema
4 that indicates said first structure and a correlation between one or more XML
5 elements in said first structure and one or more XML elements in said third
6 structure.

1 13. The method of Claim 2, further comprising:

2 based on an existing database table that corresponds to an XML element indicated by
3 said first XML schema, generating a Data Definition Language (DDL)
4 statement that, when executed, will cause a database table that corresponds to
5 said XML element to be created;

6 after generating said DDL statement, performing steps comprising:

7 deleting said first XML schema; and

8 deleting said existing database table; and

9 after deleting said first XML schema, performing steps comprising:

10 registering said second XML schema with a database system;

11 executing said DDL statement; and

12 based on said second data, inserting one or more of said one or more first

13 values into a database table that was generated as a result of executing

14 said DDL statement.

1 14. A computer-readable medium carrying one or more sequences of instructions which,

2 when executed by one or more processors, causes the one or more processors to perform the

3 method recited in Claim 1.

1 15. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 2.

1 16. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 3.

1 17. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 4.

1 18. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 5.

1 19. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 6.

1 20. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 7.

1 21. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 8.

1 22. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 9.

1 23. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 10.

1 24. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 11.

1 25. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 12.

1 26. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to perform the
3 method recited in Claim 13.